

REMARKS

Reconsideration of this application in light of the present amendment and response is respectfully requested.

Claims 1-4, 6-9, 12-14 and 16-21 have been rejected.

Claims 5, 10, 11 and 15 were previously canceled.

Claims 1-4, 6-9 and 12 have been amended.

Claims 1-4, 6-9, 12-14 and 16-21 are pending in this application.

Claims 1, 2, 4, 6, 9, 12, 14, 16, 18, 19 and 21 have been rejected under 35 U.S.C. § 103(a) as being anticipated by Shafran et al. (US 2003/0186693, hereinafter “Shafran”), in view of Dillinger et al. (US 2004/0058679, hereinafter “Dillinger”) and further in view of Croslin (US 6295275). This rejection is respectfully traversed.

The preamble of independent claim 1 has been amended to align with the language of the rest of the claim, in that applicants’ invention is concerned with overlap coverage and not traffic density, as is commonly present in the cited art. Applicants respectfully submit that the combination of recitations in claim 1 are not disclosed or suggested in any of the cited references.

Shafran describes the monitoring of statistical traffic distribution among the cells of a network. As such, Shafran is attempting solving a similar problem as applicants’ invention, but in a completely different way (i.e. from the network side instead of from the mobile side) using completely different means (i.e. a statistical approach that does not involve specific cells or mobiles instead of applicants’ approach of using a specific mobile and its cell registration). Shafran’s statistical distribution does not identify *overlapping* conditions, as in applicants’ solution, but only deals with traffic density, and therefore does not fulfill applicants’ calculating step. Therefore, Shafran can not solve the problem in the same way of applicants’ solution in using overlap conditions, as defined in the category steps. For example, Shafran identifies dividing a cell into sub-areas such as a highway [0034]. In this case, the highway sub-area may be identified as an area of high traffic density, but there is nothing to indicate that this sub-area of a cell exhibits a high overlap with another cell. Traffic density does not correlate with traffic overlap. Indeed cells can be configured to provide no overlap (e.g. see page 7 lines 15-16). Therefore, if this cell drops from the network, there is no overlapping cell to replace it, and Shafran does not provide a solution therefor. Applicants’ solution is different in that once an accurate knowledge of coverage overlap has been determined the relative importance of keeping various cells on air can be identified (see page 7 line 26 to page 8 line 1). In other words,

completely overlapping cells need not have high priority, even if density is high. In contrast, Shafran ranks priority solely on density, and does not consider overlap. Applicant proposes that cells without overlap (unique coverage) are assigned high priority first, over that of traffic density issues.

Advantageously, applicant's invention of claim 1 provides a maintenance priority to those cells that have a unique, critical coverage area that can not be covered by surrounding cells in the event of an outage of those unique cells.

Shafran is missing at least the many elements of; a) measuring coverage overlap, b) partitioning overlap measurements, c) partitioning a first category of no overlap, d) partitioning a second category of partial overlap, e) partitioning a third category of full overlap, f) an outage alarm priority, and g) basing the priority on coverage overlap.

The Examiner admits that Shafran does not suggest or disclose allocating a priority to cells based on degree of coverage, but that Dillinger does so disclose.

Although Dillinger [para. 0038] does disclose assigning a priority, the priority is based upon reception field strength for cells having different network access technologies, which is completely different from applicants' allocating an outage alarm priority, and a priority based on coverage overlap of the same network access technology. As such Dillinger is still missing all of the above elements.

Accordingly, applicants respectfully submit that amended claim 1 is now allowable over the cited references.

Independent claim 12 has also been amended to reflect the same recitations, as detailed with respect to claim 1 above, and is deemed allowable as well for the same reason.

Accordingly, applicant's amended independent claims 1 and 12 are deemed patentably distinct and nonobvious from Shafran and Dillinger et al, either in combination or alone.

Moreover, claims 2, 4, 6 and 9 are dependent on amended claim 1, hereby incorporated by reference, and are now deemed allowable as well for the same reasons. Similarly, claims 14, 16, 18, 19 and 21 are dependent on amended claim 12, hereby incorporated by reference, and are now deemed allowable as well for the same reasons.

Applicant respectfully requests that this rejection be withdrawn.

Claims 3 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Shafran in view of US Prov. 60/369,368. This rejection is respectfully traversed.

Claims 3 and 13 are dependent on amended claims 1 and 12, respectively, hereby incorporated by reference, and are therefore deemed patentable and non-obvious as well for the same reasons.

Accordingly, it is respectfully submitted that this rejection has been overcome.

Claims 3 and 13 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Shafran, in view of Dillinger, further in view of Croslin, as applied to claims 1 and 12, and further in view of US Prov. 60/369,368, hereinafter “Shapira”.

The Examiner readily admits that Shafran, as modified by Dillinger and Croslin, does not show the formula of claims 3 and 13, but argues that Shapira does so show.

Shapira discloses the determination of traffic distribution data in a network. Using the Section 2, formula 4, reference cited by the Examiner, Shapira formulates an interference probability between cells using; a) traffic density in a bin, b) the probability of a neighboring cell serving that bin, and c) a percentage of damaged traffic due to neighboring cell reusing a frequency. Of these three elements only the second element could even possibly relate to applicants’ claims 3 and 13, and even so, element (b) relates to the probability of serving, whereas applicants’ formula relates to the number of cells that are *not* serving. Therefore, Shapira actually teaches away from applicants’ invention. Further, Shapira is calculating an interference probability, whereas applicants are calculating a coverage factor, which is completely different. The formula of Shapira only provides a superficial resemblance to applicants’ formula, has different variables, and provides a completely different result than applicants’ formula. Therefore, the formula of Shapiro could not possibly be used to provide the solution provided by applicants’ invention.

Moreover, claims 3 and 13 are dependent on amended claims 1 and 12, respectively, hereby incorporated by reference, and are therefore deemed patentable and non-obvious as well for the same reasons.

Accordingly, it is respectfully submitted that this rejection has been overcome.

Claims 7 and 20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Shafran, in view of Dillinger, further in view of Croslin, as applied to claims 1 and 12, and further in view of Andersson (US 6,173,168). This rejection is respectfully traversed.

Claims 7 and 20 are dependent on amended claims 1 and 12, respectively, hereby incorporated by reference, and are therefore deemed patentable and non-obvious as well for the same reasons.

Accordingly, it is respectfully submitted that this rejection has been overcome.

The other references of record have been reviewed and applicant's invention is deemed patentably distinct and nonobvious over each taken alone or in combination.

For the foregoing reasons, applicants respectfully request that the above rejections be withdrawn.

Inasmuch as this amendment distinguishes all of the applicants' claims over the prior art references, for the many reasons indicated above, passing of this case is now believed to be in order. A Notice of Allowance is earnestly solicited.

No amendment made was related to the statutory requirements of patentability unless expressly stated herein. No amendment made was for the purpose of narrowing the scope of any claim, unless applicant has argued herein that such amendment was made to distinguish over a particular reference or combination of references.

In the event that the Examiner deems the present application non-allowable, it is requested that the Examiner telephone the Applicants' attorney at the number indicated below so that the prosecution of the present case may be advanced by the clarification of any continuing rejection or through an Examiner's amendment.

Authorization is hereby given to charge any fees necessitated by actions taken herein to Deposit Account 50-2117.

Respectfully submitted,
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